

AMENDMENTS TO THE CLAIMS

1. (CANCELED)

2. (CURRENTLY AMENDED) The method of claim 25 ~~1~~, wherein the ddA solution in the contacting step is from about 2% to about 10% weight volume ddA in water.

3. (CURRENTLY AMENDED) The method of claim 25 ~~1~~, wherein a pH during the contacting step is from about 8.0 to about 9.5.

4. (PREVIOUSLY PRESENTED) The method of claim 3, wherein substantially all of the ddI resists precipitation out of the ddI solution in the contacting step.

5. (CURRENTLY AMENDED) The method of claim 25 ~~1~~, wherein the insoluble support is functionalized to allow attachment of the enzyme thereto.

6. (PREVIOUSLY PRESENTED) The method of claim 5, wherein the attachment of the enzyme to the insoluble support is achieved using an activating agent.

7. (CANCELED)

8. (CURRENTLY AMENDED) The method of claim 25 ~~1~~, wherein the ADA has the amino acid sequence of SEQ ID NO:1.

9. (CURRENTLY AMENDED) The method of claim 25 ~~1~~, wherein the ADA is coded for by a nucleotide having SEQ ID NO: 2 or SEQ ID NO:3.

10. (CANCELED)

11. (CANCELED)

12. (CANCELED)

13. (CANCELED)

14. (CURRENTLY AMENDED) The method of claim 25 40, wherein an activity of the enzyme immobilized on the insoluble support is at least about 40 U/g.

15. (CURRENTLY AMENDED) The method of claim 3 40, wherein a pH during the contacting step is from about 7.5 to about 9.5.

16. (CURRENTLY AMENDED) The method of claim 25 40, wherein said contacting step is a continuous process performed using a packed column.

17. (CURRENTLY AMENDED) The method of claim 2 40, wherein the ddA solution in the contacting step is from about 4% to about 15% weight volume ddA in water.

18. (PREVIOUSLY PRESENTED) The method of claim 17, wherein the ddA solution is from about 5% to about 8% weight volume ddA in water.

19. (CURRENTLY AMENDED) The method of claim 25 40, wherein the isolating step includes sequentially distilling the ddI solution and adding water until a ddI slurry in aqueous mother liquor is obtained and the pH is less than about 8.

20. (CURRENTLY AMENDED) The method of claim 25 40, further comprising the steps of:

- (a) retaining a reaction mother liquor after the isolating step;
- (b) repeating the contacting step at least once using the reaction mother liquor to prepare the ddA solution; and
- (c) repeating the isolating step at least once.

21. (CURRENTLY AMENDED) The method of claim 20, wherein the isolating step produces a yield of at least about 96% ddI that is at least about 99% pure.

22. (CANCELED)

23. (CANCELED)

24. (CANCELED)

25. (CURRENTLY AMENDED) A method of making 2',3'-dideoxyinosine (ddI) comprising the steps of:

- (a) contacting a human adenosine deaminase enzyme (ADA) immobilized into an insoluble support; wherein the insoluble support is a solid resin material having a diameter of 250-600 microns, with a dideoxyadenosine (ddA) solution of at least ~~about~~ 1% weight volume ddA in water for a time and under conditions to produce a ddI solution; and
- (b) isolating the ddI from the ddI solution.

26. (PREVIOUSLY PRESENTED) The method of claim 25, wherein the insoluble support is IPS-400 or EUPERGIT.